Agilent U1211A, U1212A, and U1213A Clamp Meter

Quick Start Guide

U1211A

U1212A

U1213A

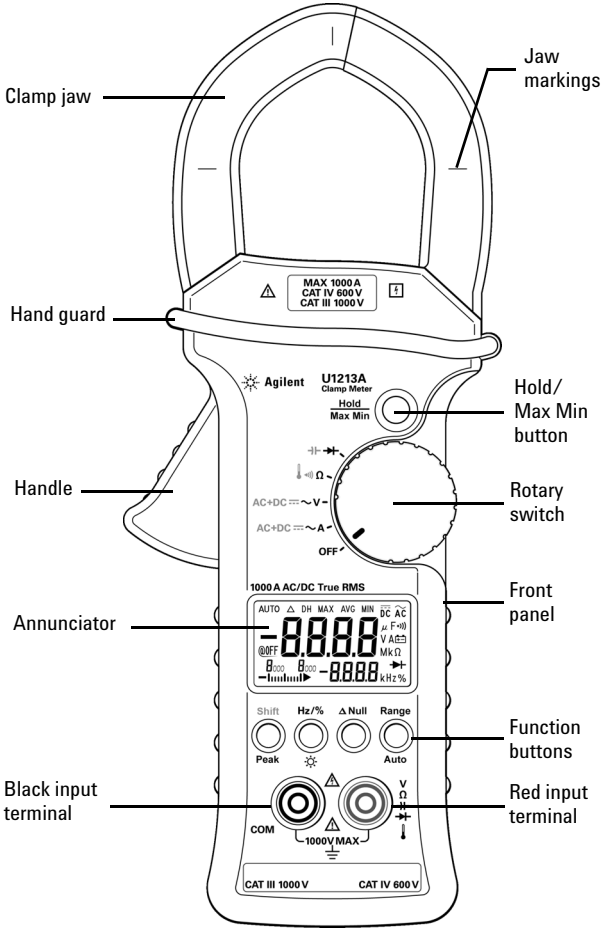
The following items are included with your clamp meter:

- ✔Standard test leads with 4 mm probes
- ✔Soft carrying case
- ✔Quick Start Guide
- ✔Certificate of Calibration

If any item is missing or damaged, contact your nearest Agilent Sales Office.

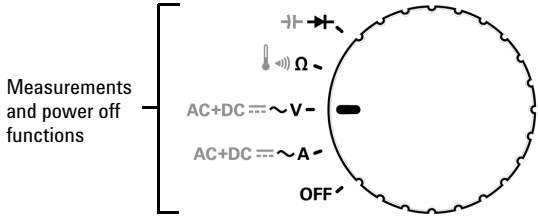
For more detailed information, please refer to the *Agilent U1211A, U1212A, and U1213A Clamp Meter User's and Service Guide* on Agilent Website: www.agilent.com/find/handheld-tools

Knowing Your Clamp Meter

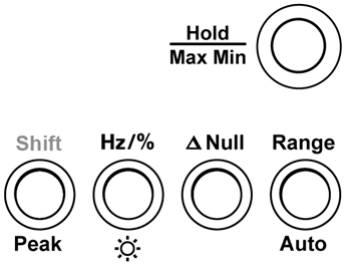


Functions and Features

Rotary switch



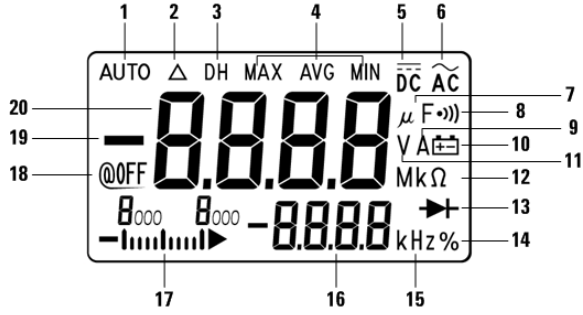
Function buttons



Actions	Steps
Freeze measured value	Press **Hold/Max Min**
• Record maximum, minimum, and calculate true average • Toggle between maximum, average, and minimum	• Press **Hold/Max Min** > 1 second • Press **Hold/Max Min** again
Toggle measurement type	Press **Shift/Peak**
Toggle peak hold test	Press **Shift/Peak** > 1 second
Enable frequency or duty cycle[1] on secondary display	Press **Hz/**☼
Turn on backlight	Press **Hz/**☼ > 1 second
Offset measured value	Press **ΔNull**
Change measuring range manually	Press **Range/Auto**
Turn on auto range	Press **Range/Auto** > 1 second

[1] Duty cycle **%** function is only available for U1213A.

Annunciator Display

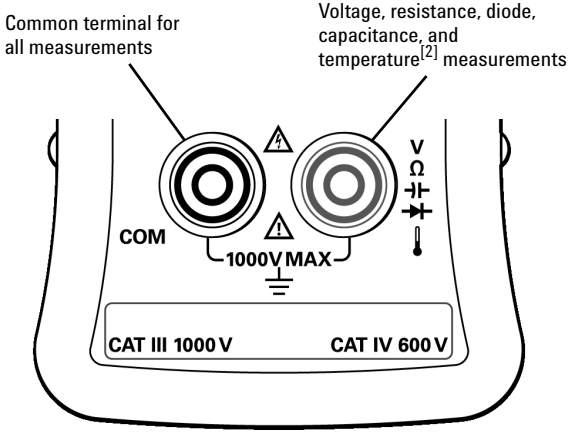


No.	Annunciator	Status
1	AUTO	Indicates auto ranging
2	△	Zeroing mode
3	DH	Data hold
4	MAX AVG MIN	Dynamic recording mode on present reading. MAX: maximum reading, MIN: minimum reading, AVG: average reading
5	DC	Direct current or voltage
6	AC	Alternating current or voltage
7	μ F	Capacitor measurement unit
8	•)))	Audible continuity indicator
9	A	Current measurement unit
10		Low battery indicator when battery voltage drops below 6.0 V
11	V	Voltage measurement unit
12	M k Ω	Resistance measurement unit and range
13		Diode measurement indicator
14	%	Duty cycle (for U1213A only)
15	kHz	Frequency measurement unit
16	-8.8.8.8	Secondary display (for frequency and duty cycle measurement and temperature unit)
17	8000 8000	Analog bar-graph with scale indicator
18	@0FF	Auto power off enabled
19		Negative polarity
20	8.8.8.8	Primary display

Input Terminals

WARNING **Ensure the terminal connections are correct for a particular measurement before making any measurement. To avoid damage to the device, do not exceed the input limit.**

Measurement functions	Input terminals		Input limits
AC current	Clamp jaw		1000 A_{rms}
DC current[1]			
AC voltage	V	COM	CAT III 1000 V_{rms} CAT IV 600 V_{rms}
DC voltage			
Resistance	Ω ⊣⊢ ▶| T	COM	1000 V_{rms} for short circuit < 0.3 A
Capacitance			
Diode			
Temperature[2]			



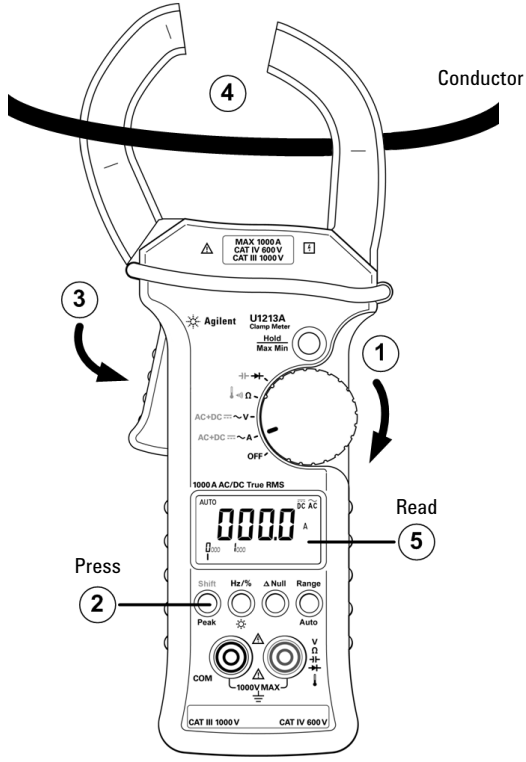
[1] DC current measurement is only available for U1212A and U1213A.

[2] Temperature function is only available for U1212A and U1213A.

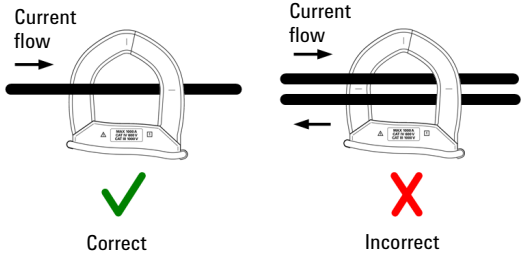
Performing Current Measurement

WARNING **Ensure the test leads are disconnected from the input terminals when measuring current with the clamp meter.**

1. Set the rotary switch to **~A**.
2. Press **Shift** to switch between AC current, DC current (for U1212A and U1213A only), and AC+DC current (for U1213A only) measurements.
3. Press the handle to open the clamp jaw.
4. Clamp around a conductor and ensure that the conductor fits the markings on the jaw.
5. Read the display. Press **Hz** to view the frequency indication on the secondary display.

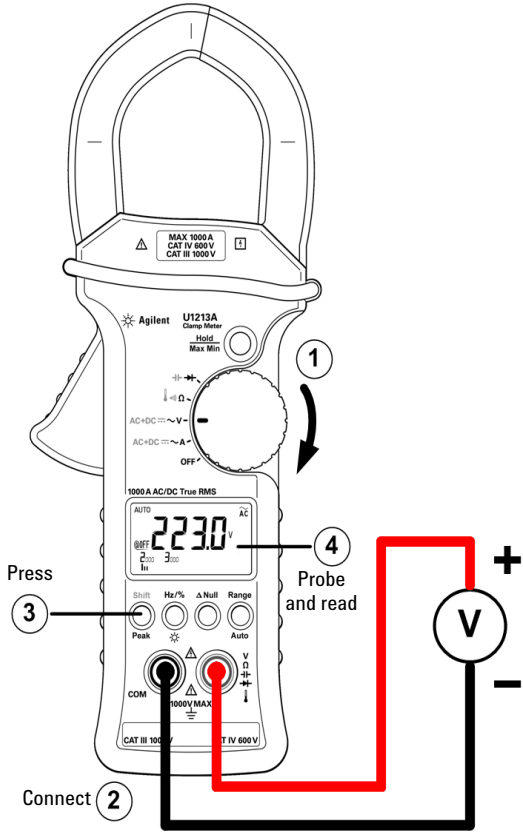


CAUTION Ensure that the clamp meter measures only one conductor at a time. Measuring multiple conductors may cause inaccuracy in measurement reading due to vector sum of currents flowing in the conductors.



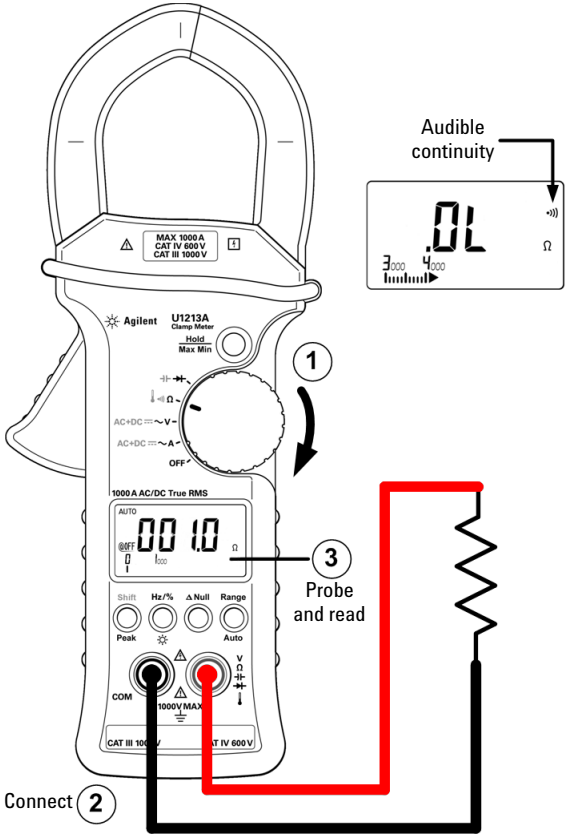
Performing Voltage Measurement

1. Set the rotary switch to **~V**.
2. Connect the red and black test leads to input terminals V (red) and COM (black) respectively.
3. Press **Shift** to switch between AC voltage, DC voltage, and AC+DC voltage (for U1213A only) measurements.
4. Probe the test points and read the display. Press **Hz** to view the frequency indication on the secondary display.



Performing Resistance Measurement and Continuity Test

1. Set the rotary switch to Ω.
2. Connect the red and black test leads to input terminals Ω (red) and COM (black) respectively.
3. Probe the test points (by shunting the resistor) and read the display.
4. To perform continuity test, press **Shift** once. The buzzer will sound when the resistance is below 10.0 Ω.

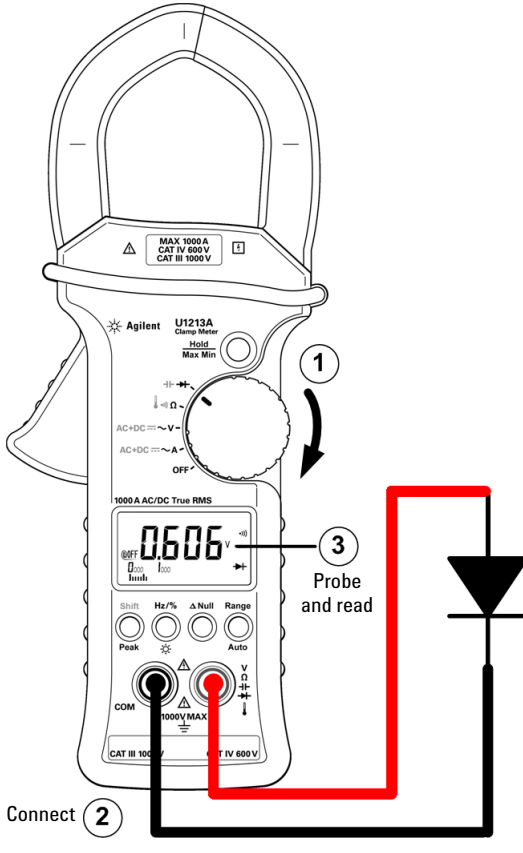


Performing Diode Measurement

1 Set the rotary switch to ⊣▶⊢.

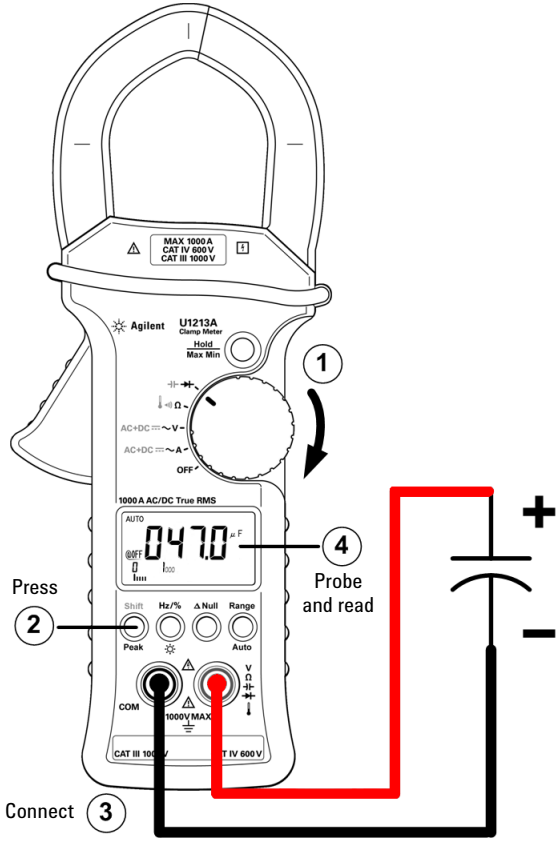
2 Connect the red and black test leads to input terminals ⊣▶⊢ (red) and COM (black) respectively.

3 Probe the test points and read the display.



Performing Capacitance Measurement

1. Set the rotary switch to ⊣⊢.
2. Press **Shift** to select capacitance measurement.
3. Connect the red and black test leads to input terminals ⊣⊢ (red) and COM (black) respectively.
4. Probe the test points and read the display.

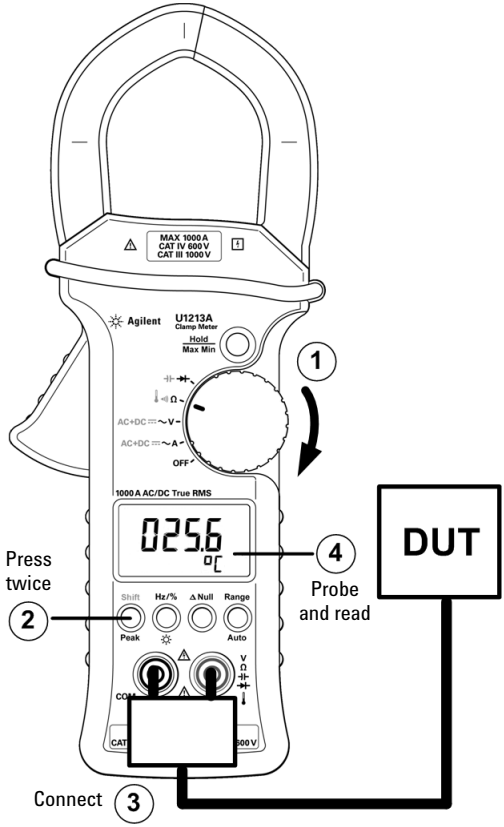


CAUTION Discharge the capacitors before performing the measurements.

Performing Temperature Measurement

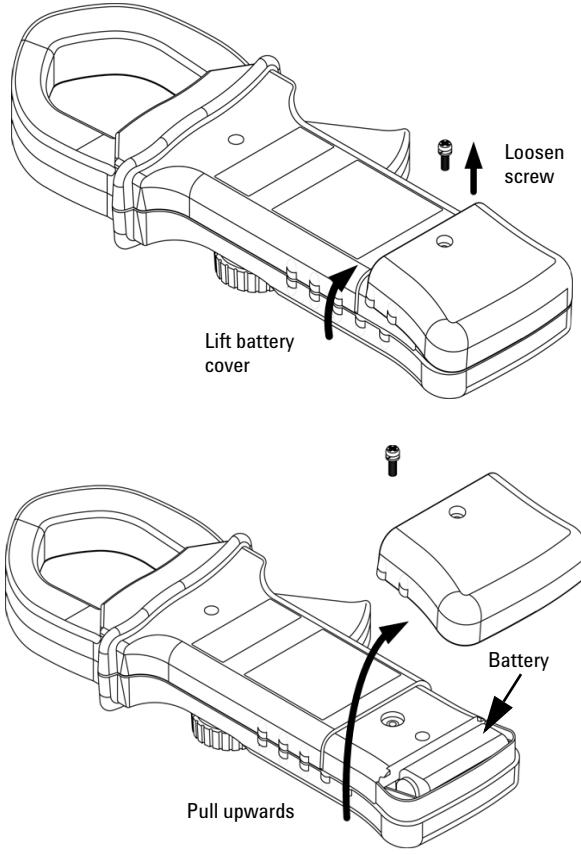
For U1212A and U1213A only

1. Set the rotary switch to Ω.
2. Press **Shift** twice to select temperature measurement.
3. Connect the thermocouple adapter (with the thermocouple probe connected to it) into input terminals (red) and COM (black).
4. Touch the measurement surface (device under test) with the thermocouple probe and read the display.



Replacing the Battery

1. Set the rotary switch to **OFF**.
2. Disconnect test leads from the input terminal.
3. Loosen the screw on the battery cover.
4. Lift the battery cover slightly, then pull the battery cover upwards.
5. Replace the specified battery (9 V).
6. Reverse the procedures above to close the cover.



Regulatory Markings

	The CE mark is a registered trademark of the European Community. This CE mark shows that the product complies with all the relevant European Legal Directives.
	The CSA mark is a registered trademark of the Canadian Standards Association.
ICES/ NMB-001	ICES/NMB-001 indicates that this ISM device complies with the Canadian ICES-001. Cet appareil ISM est confomre a la norme NMB-001 du Canada.
	The C-tick mark is a registered trademark of the Spectrum Management Agency of Australia. This signifies compliance with the Australia EMC Framework regulations under the terms of the Radio Communication Act of 1992.
	Product contains restricted substance(s) above the maximum value, with 40 yr Environmental Protection Use Period.
	This instrument complies with the WEEE Directive (2002/96/EC) marking requirement. This affixed product label indicates that you must not discard this electrical or electronic product in domestic household waste.

Safety Notices

CAUTION A **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a **CAUTION** notice until the indicated conditions are fully understood and met.

WARNING **A WARNING notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.**

Safety Symbols

	Direct current (DC)
	Alternating current (AC)
	Earth (ground) terminal
	Application around and removal from HAZARDOUS LIVE conductors is permitted
	Equipment protected throughout by double insulation or reinforced insulation
	Caution, risk of electric shock
	Caution, risk of danger (refer to the instrument manual for specific Warning or Caution information)
CAT III 1000 V	Category III 1000 V overvoltage protection
CAT IV 600 V	Category IV 600 V overvoltage protection

For further information on safety, refer to the *U1211A, U1212A, and U1213A Clamp Meter User's and Service Guide*.

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